FIG.1

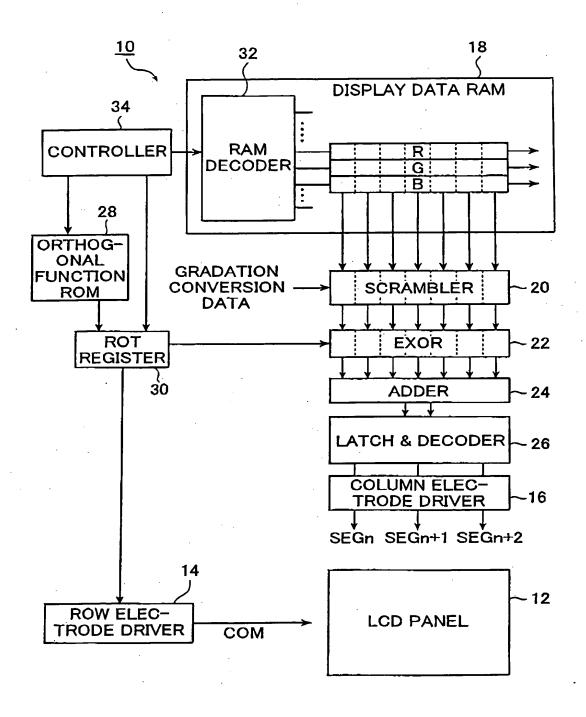


FIG.2A

FIG.2C

TIONA	AR4	T	T	-	T
FUNC	<b>AR3</b>	1	1-	-	1
ORTHOGONAL FUNCTION A	AR2	1	1-	-1	<u> </u> -1
ORTHO	ARI	1	1	1	<b> -</b>
		AC1	AC2	AC3	AC4

FIG.2B

						_
	TON B	BR4	<u> -</u>	l	1-	<u> </u> -
	ORTHOGONAL FUNCTION B	BR3 BR4	ļ-	1	1	1
) ;	GONAL	BR2	-1	<b>1</b>	<b> </b> -	1
	ORTHO	BR1	1	1	<b> -</b>	1
			BC1	BC2	ВСЗ	BC4

												,				
	Q.	E GOIRER EMIT		DIVIDED SE	0	0	0	0	0	0	0	0	<	( 12	4	
	FIEL	ROW SELECTION		DIVIDED SE	0	0	0	0	0	0	0	0	۵	ם מ	(1)	
!		TIME PERIOD 2	RIOD 2	DIVIDED SE	0	0	0	0	<	< C	2		0	0	0	0
I	FOURTH	ROW SELECTION	RIOD 1	DIVIDED SE	0	0	0	0		ם מ	<u> </u>		0	0	0	0
	5	TIME PERIOD 1	RIOD 2	DIVIDED SE	•	۸ D	7 4	- 1	0	0	0	0	0	0	0	0
	FO	ROW SELECTION	1 0019	DIVIDED SE		<b>2</b> 0	۲ در	,	0	0	0	0	0	0	0	0
		TIME PERIOD 3	RIOD 2	DIVIDED SE	0	0	0	0	0	0	0	0	<	<u> </u>	2	
	FIELD	ROW SELECTION	RIOD (	DIVIDED SE	0	0	0	0	0	0	0	0	C	ם מ	-	
	E	TIME PERIOD 2	RIOD 2	OIVIDED SE	0	0	0	0	•	A D	4		0	0	0	0
щ	2	ROW SELECTION	1 001F	DIVIDEO SE	0	0	0	0	ď	ם מ	<u> </u>		0	0	0	0
CYCL	THIRD	I DOIRE PERIOD 1	RIOD 2	DIVIDED SE	Ţ-,	۷.	۲ °	1	0	0	0	0	0	0	0	0
	Ι-	ROW SELECTION	LECTION	DIVIDED SE	1	<u> </u>	۲ –	-	0	0	0	0	0	0	0	9
DISPLAY	Q.	TIME PERIOD 3	ROD 2	DIVIDED SE	0	0	0	0	0	0	0	0	1	ם מ	۷ ک	
걸	프	ноправод		BS QBQIVIQ	0	0	0	0	0	0	0	0	·	<b>V</b> D	۲ ۳:	<b>&gt;</b>
DIS		S GOIRIA BMIT	LECTION	BS CBOIVIO	0	0	0	0	١	ם מ	۲ م	1	0	0	0	0
	N	ROW SELECTION	LECTION	DIVIDED SE	0	0	0	0		<u> </u>			0	0	0	10
	SECOND	TIME PERIOD 1	NOLLOBL	DIVIDED SE		<u> </u>	۲ 4	۲	0	0	0	0	0	0	0	0
	SE	ROW SELECTION	LECTION	DIVIDED SE			<u> </u>		0	0	0	0	0	0	0	0
	)	TIME PERIOD 3	LECTION	DIVIDED SE	0	0	0	0	0	0	0	0	_ '	20	<u> </u>	1
	FIELD	вом зегестом	LECTION	DIVIDED SE	0	0	0	0	0	0	0	0	ļ	<b>Α</b> C	, .	_
		S OOIR34 3MIT	LECTION	DIVIDED SE	0	0	0	0		Ω Ω			0	10	12	1
	ST	ROW SELECTION	LECTION	DIVIDED SE	0	<u></u>	0	0	<del> </del>	Υ O			0	9	2	0
	FIRST	TIME PERIOD 1	NOITOBL	DIVIDED SE		<u>m</u> c	۲ م	1	0	0	0	0	0	0	0	0
		ROW SELECTION	LECTION	OIVIDED SE		<u>۷</u> د	<u>r</u> –		0	0	0	0	0	0	10	0
		•			<b>\S</b>	<b>₹</b> 2	8	₹	₹	92	1	88	\$	100	E	ROW12
					ROW	ROW2	ROWS	ROW	ROWS	ROW6	8 §	ROW8	ROW9	ROW M	§ ĕ	18
									1							

FIG. 3

	Q.	ROW SELECTION 3	DIVIDED SELECTION	0	0	0	0	0	0	0	0	T	1		긔
	FIEL	ROW SELECTION	DIVIDED SELECTION	0	0	0	0	0	0	0	0	T			
		TIME PERIOD 2	DIVIDED SELECTION	0	0	0	0		<u>-</u>	T	工	9	<u>의</u>		
	4	ROW SELECTION	DIVIDED SELECTION	0	0	0	0	_		7	_	0		9	
	FOURTH	TIME PERIOD 1	DIVIDED SELECTION TIME PERIOD 2	7	7	1	-1	0	0	0	0	0	2	0	의
	F(	ROW SELECTION	DIVIDED SELECTION I	T	_	1	1	0	0	0	0	0	0	0	의
	Ω	E GOIRE PERIOD 3	DIVIDED SELECTION	0	0	0	0	0	0	0	0	1	-1	1	긔
	FIEL	ROW SELECTION	DIVIDED SELECTION	0	0	0 (	0	0	0	1 0	0	1	) [	0-1	딍
		ROW SELECTION 2	TIME PERIOD 2 TIME PERIOD 2	0 0	0 0	0 0	0 0	1-1	1		1-1	0 0	0 0	0 (	
CYCLE	THIRD		DIVIDED SELECTION			)	)	0-1	0	0	0	0	) 0	0	0
χC	TH	ROW SELECTION	DIVIDED SELECTION		ī	-	<u> -</u>	0	0	0	0	0	0	0	9
		MOTTOR 122 MOR	TIME PERIOD 2			0-1	1	0	0	0	0			)	)
DISPLAY		TIME PERIOD 3	DIVIDED SELECTION	0	0		0	0	0	0	0	1		<u>-</u> - 1	1
SP	FIE	DOW SEI ECTION	DIVIDED SELECTION	0	0	0	0	)				10	-	0	
		ROW SELECTION 2	TIME PERIOD 2  DIVIDED SELECTION  TIME PERIOD 2	0	0	0	0	1-1	<u> </u>	1-1	_	0	0	0	0
	8	NOTO 3 130 MOD	TIME PERIOD 2	<u> </u>			=	0	0	0	등	0	0	0	0
	SECOND	ROW SELECTION	DIVIDED SELECTION	드	_	1	+	0	0	0	0		0	6	0
	S	NOTION 130 WOO	TIME PERIOD 2	6	-	9	6	0	0	0	0		_	=	
		ROW SELECTION	DIVIDED SELECTION	-  -	0	0	0	0		0	0	1	1	1	
ı	田田	NOLLOS ISS MOD	DIVIDED SELECTION	0	0	0	6		_	=	=	0	0	0	-
		ROW SELECTION 2	DIVIDED SELECTION	0	0	0	0	+	Ė	1	1	0	0	0	0
	FIRST		DIVIDED SELECTION		_	1		0	1	0	0	0	6	0	0
	臣	ROW SELECTION	DIVIDED SELECTION		1	-	<u> </u>		0	0	-	0	0	0	0
		110110111111111111111111111111111111111	DIVIDED SELECTION	Ĺ		_	<u> </u>		Ľ						
				×	ROW2	<b>ROW3</b>	ROW4	ROW5	<b>ROW6</b>	ROW7	ROW8	ROW9	ROW10	ROWII	ROW12
				ROW	운	윤	윤	윤	<u>8</u>	윤	윤	18	윤	윤	
				B	لــ	ㅗ	_	B		ㅈ	2	B		$\overline{x}$	က

FIG.4A

ðį	SELECTION PAITERN	(ORTHOGONAL FUNCTION A)	ARI AR2 AR3 AR4	AC1 1 1 1 -1	AC2 1 -1 -1 -1	AC3 1 -1 1 1	AC4 -1 -1 1 -1	

FIG.4E	SOR STC	
FIG.4D	COLUMN ELECTRODE	
FIG.4C	RESULT OF	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
FIG. 4B		2

5

EFFECTIVE VOLTAGE VALUE CORRE-SPONDING TO THE FIG. 5E COLUMN ELECTRODE E VOLTAGE PATTERN (ORTHOGONAL FUNCTION **SELECTION PATTERN** ROW ELECTRODE **5**C BR1|BR2|BR3|BR4 FIG. 5A FIG. BC1 BC2 BC3 BC4 **DISPLAY PATTERN** FIG. 5B S **R**2 2

FIG.6A

ORTHOGONAL FUNCTION B BR1|BR2|BR3|BR4|BR5|BR6|BR7|BR8

FIG.6B

_	AR8	ļ-	1		1-	-	1-	ļ-
A NC	AR7 AR8	1-1	۳-ا	1	1	۱	<b> -</b>	ļ-
CTI			<b> -</b>	<u> -</u>	1-	1-	1-	<b> -</b>
FU	AR5 AR6	-1	1	-1	-1	-1	1	<b> -</b>
ONAL	AR4	-1	-1	-1	-1	-	-1	1
106(	<b>AR3</b>	1	1	<b>1</b> –	1	1-	ا –ا	1
ORTHOGONAL FUNCTION A	AR2	-1	-	1	7	1	1	1
	AR1	<u> </u>	-	-1	1	1	1	-1

 $\overline{\tau}|\overline{\tau}$ 

FIG.6C

	CR8	-1	-1	-1	1	1	<b>]</b>	1
ONC.		1-	<b>l</b> -	ļ-	1-	1	1	Ţ
FUNCTION C	CR6 CR7	1-	1-	1	-1	<b> -</b>	-1	1-
	CR4 CR5	1	<b> -</b>	۱-	1	ا-ا	-1	<b> -</b>
JNAL	CR4	-1	1	-1	-1	-1	-1	1
HOGONAL	CR3	<b>1</b> -	1	1-	1	-1	1	<b>[-1</b>
ORIT	<b>CR2</b>	1	1	-1	-1	1	-1	-1
)	CR1	1	-1	-	1-	1-	1	1
,								

# FIG.6D

_ f		HOGONA	Ĭ N		<u> </u>		
<b>DR1</b>   DR2	22	DR3DR4DR5DR6	DR4	DR5	DR6	DR.	DR8
	-	1-	1	-1	-1	-1	-
	1	<u> </u> -	-1	1	-1	-1	-
<u> </u>		1	1	-1	-1	<b>]</b> [	-1
	-1	-1	-1	1-	1	-1	1
<u> </u>	7	-	1-	1	<b> -</b>	-1	1
	-	1-1	1-	<b>1</b> -1	-1	1	1
L	1	1	ا-ا	<b>!-</b>	<b> -</b>	_	T

FIG. 7

		-		TIME PERIOD 4	0	ठा	0	0	ठा	0	ठा				~ ·			
			D 2	DIVIDED SELECTION	0	0	0	0	히	0	0				<u>~</u> ~			$\dashv$
1		გ <u>ხ</u>	<b>₹</b> 0	DIVIDED SELECTION	0	0	0	0	0	0	0							一
	FIE		EE	TIME PERIOD !	0	0	0	8	0	<del> </del>	0				<u>د د</u>			$\dashv$
		<u> </u>	<u> </u>	DIVIDED SELECTION								0	न	ठा	<u>이</u>		<u>ा</u>	허
	OURTH	No	_	DIVIDED SELECTION			<u>_</u>	<u> </u>				0	싊		허	<del> </del>		ᅴ
	13	<b>≥</b> 5	뿔	DIVIDED SELECTION			<u>ပ</u>	<u>m</u>	9					<del> </del>	히	ᅴ		
	<u> </u>	ROW LECT		DIVIDED SELECTION			<u>m</u>	<u> </u>	<u>ۍ                                    </u>			9						5
1		SE	正	DIVIDED SELECTION				<b>M</b>				0	9	<u> </u>	<u> </u>	0	$\subseteq$	$\dashv$
		NO	7	DIVIDED SELECTION	0	0	0	0	0	0	0				<u> </u>			
İ				DIVIDED SELECTION	0	0	0	0	0	0	0			<u>ပ</u>	R (	<u> </u>		
	品			DIVIDED SELECTION TIME PERIOD 2	0	0	0	0	0	0	0				<u>出</u>			
	膃	SE	古	DIVIDED SELECTION	0	0	0	0	0	0	0				<b>出</b>		-1	
	윤	NO	_	DIVIDED SELECTION 4			0	8	9_			0	0	의	0			0
4	THIRD			DIVIDED SELECTION TIME PERIOD 3			ပ	四	ഗ			0	0	0	0	의	의	0
CYCL	_	死月		DIVIDED SELECTION		·	<u> </u>	<u>ac</u>	4			0	0	0	0		의	0
10		SEI	교	DIVIDED SELECTION I				R	ಣ			0	0	0	0		0	0
DISPLAY		8	2	DIVIDED SELECTION TIME PERIOD 4	0	0	0	0	0	0	0			0	<u>m</u>	9		
I <sup>元</sup>		ECT.		DIVIDED SELECTION TIME PERIOD 3	0	0	0	0	0	0	0			ပ	2	က		
	田田	る見		DIVIDED SELECTION  TIME PERIOD 2	0	0	0	0	0	0	0	<u> </u>	· 		<u>~</u>			
		SE	盂	DIVIDED SELECTION 1	0	0	0	0	0	0	0				<u>~</u>			_
	8	NO	_	DIVIDED SELECTION	_	<u>.</u>	Ω	Œ	<sub>5</sub>			0	0	0	0	0	0	0
1	SEC(		#8	DIVIDED SELECTION			ပ	Œ	4			0	0	0	0	0	0	0
	S	る可	FRIO	DIVIDED SELECTION  TIME PERIOD 2			<u>m</u>	K	က			0	0	0	0	0	0	0
		SEI	<u> </u>	DIVIDED SELECTION				8				0	0	0	0	0	0	0
		NO	2	DIVIDED SELECTION	0	0	0	0	0	0	0			0	<u>m</u>	ഹ		
				DIVIDED SELECTION	0	0	0	0	0	10	0	_		<u>ပ</u>	ĸ	4		
		문피		DIVIDED SELECTION	0	0	0	0	0	0	0			0	ĸ	<u>ය</u>		
	FIE	SE	2	DIVIDED SELECTION	0	0	0	0	0	0	0			⋖	$\alpha$			
	ĭ	2	-	DIVIDED SELECTION			٥	8	4			0	0	0	0	0	0	0
	FIRST	≥ E	ا جرید	LIME PERIOD 3 DIVIDED SELECTION			S	ĸ	က			0	0	0	0	0	0	0
	Щ	RO EC	FRIOD FRIOD	DIVIDED SELECTION			В	2	7			0	0	0	0	0	0	0
		) SEL	님	DIVIDED SELECTION				R				0	0	0	0	0	0	0
	لـــــا	(0)		LIVOITO SEI EOTIONI	=	2		r	_	9	12	<u></u>	65	2	E	V12	V13	V14
					ROWI	ROW2	ROW3	ROW4	ROWS	ROW6	ROW	ROWB	ROWS	ROWIO	ROW	ROW12	ROWIS	ROW14
					ئى	<u> </u>		<u> </u>		<del></del>		<u>,</u>	<u>,</u>				<del></del> -	=

FIG.8

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		\> ^	J NOI.	D SELECT DOMEST	DIVIDE	0	0	9		0	0	0				<u>~</u>	4		
	_	SHTER	1 5		MIL	0	0	0	0	0	0	0			ပ	α (			
		TIME	NO. 2	A 15 T -	WIL	0	0	0	ठ	0	0	0			В	<u>a</u>	7.		$\neg$
	田田	E E	1 100	E PERIOD	MIT	0	0	0	0	0	0	0			A	٣,	_		$\neg$
1	王	- S -	7		MIT	$\vdash$		_	<u>~</u>	 ~			0	0	0	0	0	0	0
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		۳ 'بيسا	1 MOF	D SELECT	<u>DINIDE</u>	_							0	0	0	0	0	히	0
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	1	NO v	1 NOT	D SELECT D SELECT	<u>DINIDE</u>	0	0	0	0	0	0	0			<u>Ω</u>	<u>~</u>	<u>က</u>		
		8588	NOI	E PERIOD	DIVID	0	0	0	0	0	0	0			<u>Q</u>	<b>田</b>	2		
	믇		المريدا =	D SELECT	DIVIDE	0	0	0	0	0	0	0			В	<u>m</u>			
			[] L	D SELECT	DIVIDE	0	0	0	0	0	0	0			⋖	$\mathbf{r}$	∞		
	SEVENTH	NO -	1	D SELECT OOIR39	MIT			۵	8	2	_		0	0	0	0	0	0	0
Щ	VE	I≥¤w⊆	3 [	D SELECT GOIRING	MIT			ပ	8	—			0	0	0	0	0	0	0
CYCLE	S	マヨリ	201	D SELECT	MIT			В	4	<u></u>			0	0	0	0	0	0	0
ပြ				D SELECT	MIT	<u> </u>		4	卍	_			0	0	0	0	0.	0	0
¥		No S	1 1	D SELECT	MIT	0	0	0	0	0	0	0			۵	ĸ	7		
DISPLAY		⊃س⊒<ا	3 2	D SELECT	WIL	0	0	0	0	0	0	0			ပ	R	_		
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	FIELD		'	TOSTAS O	MIT	0	0	0	0	0	0	0			A	K	_		<u> </u>
		S	7 7	OOIREG DECECT	MIT	_			Œ		<u>.                                    </u>	<u> </u>	0	0	0	0	0	0	0
	SIXTH	>Euc	3 (	E PERIOD D SELECT	MIT	<del>                                     </del>	_	<del></del>	<u>=</u>				0	0	0	0	0	0	0
	S	NECT NECT NECT NECT NECT NECT NECT NECT	2	E PERIOD D SELECT	MIT	$\vdash$			<u>~</u>				0	0	0	0	0	0	0
		무그는	NOL	D SELECT E PERIOD	MIT 301VIO		_		<u>~</u>				0	0	0	0	0	0	0
		S	INOL	E PERIOD D SELECT	<u>DINIDE</u>	0	0	0	6	ठ	ठ	10	├			<u>~</u>	<u></u>	L	L
		M TION E ID 2		E PERIOD	DIVIDE	0	0	0	0	0	0	0					-		
		<b>スロタ</b> C		E PERIOD	DIVIDE	0		0	0	0	0	0	<b> </b>			<u> </u>			
	ELL	SHIELE SHIE SHIELE SHIELE SHIELE SHIELE SHIELE SHIE SHIE SHIE SHIE SHIE SHIE SHIE SHI	i NOL	<u>D SELECT</u>	DIVIDE		0									<u>~</u>			
	ᄔᆝ	SE P	NOL	E PERIOD	DIVIDE	0	0	0	0	0	<u> </u>	0				<u> </u>			
	FIFTH	NO T	NOI	E BERIOD D ZELECT	DIVIDE			<u></u>	<u>m</u>	<u> </u>			0	0	0	0	0	0	0
	빌		NOL	E BERIOD D ZELECT	DIVIDE			ပ	Œ	_			0	0	0	0	0	0	0
	_	SHIP FINE	2	E <b>SECTE</b>	MIT			B	R	9			0	0	0	0	0	0	0
l l	i	SEL		E PERIOD	MII			۷	<u>m</u>	5			0	0	0	0	0	0	0
	1	(7)																	

FIG.9A

#### ROW ELECTRODE SELECTION PATTERN (ORTHOGONAL FUNCTION A)

AR1	AR2	AR3	AR4	AR5	AR6	AR7	AR8
-1	-1	-1	-1	-1	1	-1	-1
-1	-1	1	-1	1	-1	-1	1
-]	1 _1	-I	-I	- I -1	-   -1		_
Ιi	-1	-1	l i	-1	<b>-</b> i	-i	[ i]
i	i	-1	-1	1	-1	-1	-1
-1	1	1	1	_1	_1	-	<u>[-1</u> ]

FIG.9B	FIG.9C	FIG.9D	FIG.9E
DISPLAY PATTERN R1R2R3R4R5R6R7	RESULT OF MLA OPERATION		VALUE CORRESPONDING O THE EFFECTIVE VOLTAGE R1 R2 R3 R4 R5 R6 R7
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1-1-3-3-5-3-1 1-3-3-5-1-3-1 1-3-3-1-1-3-1 1-3-3-1-1-3-1 1-3-3-1-1-3-1 1-1-3-1-1-1 1-1-1-1-1-1-1 1-1-1-1-1-1-1-1 1-1-1-1-	1 1 1 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
	: 1 -3 3 -1 1 3 1 1 -1 1 3 1 1 -1 1 3 1 1 -1 1 3 1 1 3 1 1 3 1 1 3 1 1 3 1 1 3 1 1 3 1 1 3 1 1 3 1 1 3 1 1 3 1 1 3 1 3 1 1 3 1 3 1 3 1 1 1 1 1 3 1 3 1 3 1 1 1 1 1 3 1 3 1 3 1 1 1 1 1 3 1 3 1 3 1 1 1 1 1 3 1 3 1 3 1 1 1 1 1 3 1 3 1 3 1 1 1 1 1 3 1 3 1 3 1 1 1 1 1 3 1 3 1 3 1 1 1 1 1 3 1 3 1 3 1 1 1 1 1 3 1 3 1 3 1 1 1 1 3 1 3 1 3 1 1 1 1 1 3 1 3 1 3 1 1 1 1 1 3 1 3 1 1 1 1 1 3 1 3 1 1 1 1 1 3 1 3 1 1 1 1 1 1 3 1 3 1 1 1 1 1 1 3 1 3 1 1 1 1 1 1 3 1	-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	:: -4-4 4-4 4-4 4 -4-4 4-4 4 -4-4 4-4 4 -4-4 4-4

FIG. 10A

#### ROW ELECTRODE SELECTION PATTERN (ORTHOGONAL FUNCTION B)

BR1	BR2	BR3	BR4	BR5	BR6	BR7	BR8
-18	1	1	1	-1	-1	-1	-1
-1	-1	-1	-1	-1	1	-1	-1
-1	-1	1	-1	1	-1	-1	1
-1	1	-1	-1	-1	-1	1	1
1	-1	1	-1	-1	-1	]	-]
	-1	-1	]	-]	-]	·-]	][
1 1	]	-1	-1	1	-1	-1	-1

## FIG.10B FIG.10C FIG.10D FIG.10E

DISPLAY PATTERN R1 R2 R3 R4 R5 R6 R7	RESULT OF MLA OPERATION		VALUE CORRESPONDING O THE EFFECTIVE VOLTAGE R1 R2 R3 R4 R5 R6 R7
	-1-1-1-3-3-5-3-1 -3-3-1-1-5-3-1 -3-1-5-1-3-1-3 -5-1-3-3-3-1 -3-1-1-3-5 -5-1-1-1-3-1 -5-1-1-1-1-1 -7-1-1-1-1-1-3 -1-5-3-1-3-1 -1-1-1-1-1-1-1-3 -1-1-1-1-1-1-1	1 1 1 1 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
1 1 - 1 1 - 1 1 1 1 - 1 - 1 1 - 1 - 1 1 -	-1 3 -5 1 -3 -1 -3 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	-1 1-3 1-1-1-1-1 -1 1 1-1-3 1 1-1 -1 1 1-1-3 1 1-1 -1 1-1-1-1 1 1-3 -1 -1-1 1 1-3-1 -1 1 1 1 1-1-1 -3 1 1 1 1 1-3-1 -1 1 1 1 1-3-1 -1 1 1 1 1-1-3-1 -1 1 1 1-1-1-3-1 -1 1 1 1-1-1-1 -3 1 1-1 1-1-1 -3 1 1-1 1-1-1 -1 1 1-3-1-1 -1 1 1-3-1-1 -1 1 1-3-1-1 -1 1 1-1-1-1	-4 -4 4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4

FIG.11A

#### ROW ELECTRODE SELECTION PATTERN (ORTHOGONAL FUNCTION C)

CR1	CR2	CR3	CR4	CR5	CR6	CR7	CR8
	1	-1	-1	1	-1	-1	-1
-1	-1			-1 -1	- I	- I - 1	-1
-i	-i	i	-i	i	- <u>i</u>	-1	1
-1		-1	-]  -1	-]  -1	-1 -1	] 1	-
li	-1	_i	Ιi	-i	-i	-i	i

## FIG.11B FIG.11C FIG.11D FIG.11E

		• •	VALUE
			ORRESPONDING
DISPLAY	RESULT OF		THE EFFECTIVE
PATTERN	MLA	VOLTAGE PATTERN	VOLTAGE
R1 R2 R3 R4 R5 R6 R7	OPERATION -1 -1 -1 -3 -3 -5 -3 -1	11111311	R1 R2 R3 R4 R5 R6 R7
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-3   1-5-1-3-1-3	1-1-1 3 1 1 1 1	4 4 4 4 4 4-4
1 1 1 1 1-1 1	-3 1-3-1-1-3-5 1	1-1 1 1 1 1 3-1	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
1 1 1 1 1-1-1	1-3 1-1-1-3-5-3	1-1 1-1 1 1 1 3 1 l	4 4 4 4 4 4 4
i i i i -1 1- <u>1</u> }	-1 -1 3-3 1-1-3-5  -1 -1 -1 1 1-1-7-1		4 4 4 4 4 4 4 4 4
1 1 1 1 -1 -1 1	-1 -1 -1	1-1-1 1-1-1 3 1	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
1 1 1 -1 1 1 1	1 1-3-1-5-3-1-3	-1-1 1 1 3 1 1 1     1-1 1 1 1 1-1 3	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
	-1 3-1-3-3-1 1-5  -1 3-5 1-3-1-3-1	1-1 3-1 1 1 1 1 1	4 4 4-4 4-4 4
1 1 1-1 1-1-1	-3 5-3-1-1 1-1-3   3-1-1 1-3-1-3-5	1-3 1 1 1-1 1 1	4 4 4 4 4 4 4 4
1 1 1-1-1 1 1	1 1 1-1-1 1-1-7	-i-i-i i i-i i 3	4 4 4-4-4 4-4
	1 1-3 3-1 1-5-3 -1 3-1 1 1 3-3-5	-1-1 1-1 1-1 3 1     1-1 1-1-1 1 3	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
	1 1 1 -1 -1 -7 -1 1	-i-i-i i i i i i i -i	4 4-4 4 4 4 4
	-1 3 3-3 1-5 1-1 -1 3-1 1 1-5-3 3	1-1-1 1-1 3-1 1	4 4-4 4 4 4-4
1 1-1 1 1-1 1	-3 5 1 -1 3 -3 -1 1	1-3-1 1-1 1 1-1	4 4 - 4 4 4 - 4 - 4
1 1-1 1-1 1 1	3-1 3 1 1-5-3-1	-1 1-1-1-1 3 1 1	4 4-4 4-4 4 4
-1 -1 1 -1 -1 -1    -1 -1 1 -1 -1 1 1	-3 1-3-1-1 5 3 1     3-5-1 1-3 3 1-1	1-1 1 1 1-3-1-1	-4-4 4-4 4-4-4    -4-4 4-4-4 4 4
-1-1 1-1 1-1	1 -3 1 -1 -1 5 3 -3	-1 1-1 1 1-3-1 1	-4-4 4-4-4 4-4
-1-1 1-1-1-1 1	1-3-3 3-1 5-1 1	-1 1 1-1 1-3 1-1   1 1 1-1-1-3-1 1	-4-4 4-4-4-4 4
	1-3 1-1-1-3 3 5	-i i -i i i i -i -i -i	-4-4-4-4-4-4-4
-1-1-1 1 1 1-1	-1 -1 3 -3 1 -1 5 3 -1 -1 -1 1 1 -1 1 7	1 1-1 1-1 1-3-1	-4-4-4 4 4 4-4  -4-4-4 4 4-4 4
-1-1-1	I-3 1 1-1 3 1 3 5	1-1-1 1-1-1-3	-4-4-4 4 4-4-4
	3-5 3 1 1-1 1 3	-1 3-1-1-1 1-1-1  -1 1-3 1-1-1-1	-4-4-4 4-4 4 4  -4-4-4 4-4 4-4
	1-3 5-1 3 1 3 1 1 1 -3 1 3 1 3 1 5	- 1-1-1-1 1-3	-4-4-4 4-4-4 4
-i-i-i-i-i-i-i	-1 -1 3 1 5 3 1 3	1 1-1-1-3-1-1-1	-4-4-4 4-4-4-4  -4-4-4-4 4 4 4
-1 -1 -1 -1 1 1 1    -1 -1 -1 -1 1 1 -1	3-1-1 1-3-1 5 3	-1	-4-4-4-4-4-4
[-i-i-i i-i i]	1 1-3 3-1 1 3 5	-1-1 1-1 1-1-1-3	-4-4-4-4-4-4-4
-1 -1 -1 -1 1 -1 -1    -1 -1 -1 -1 -1 1 1	-1 3-1 1 1 3 5 3 5-3 1 3-1 1 3 1	1-1 1-1-1-1-3-1	-4-4-4-4-4-4-4  -4-4-4-4-4-4-4-4
-1-1-1-1 1-1	3-1 3 1 1 3 5-1	-1 i -i -i -i -i -3 i	-4-4-4-4-4-4-4
	3-1-1 5 1 3 1 3 1 1 1 1 1 1 3 3 5 3 1	-1	-4 -4 -4 -4 -4 -4    -4 -4 -4 -4 -4 -4 -4
[-1 -1 -1 -1 -1 -1]			

FIG.12A

ROW ELECTRODE SELECTION PATTERN (ORTHOGONAL FUNCTION D)

DR1	DR2	DR3	DR4	DR5	DR6	DR7	DR8
1	-1	-1	1	-1	1	-1	1
1	1	-1	-1	1	-1	-1	-1
-]	1	]		_1 _1	-]	] 1	_1
_i	-1	1	i 1	1	-1	-1	-
_i	i	-1	-1	i	-1	i	i
1	-1	1	-1	1	-1	1	-1

## FIG.12B FIG.12C FIG.12D FIG.12E

			VALUE
DISPLAY	RESULT OF		ORRESPONDING O THE EFFECTIVE
PATTERN	MLA	VOLTAGE PATTERN	VOLTAGE
R1R2R3R4R5R6R7	OPERATION -1-1 1-3-3-5-3-1	11111311	R1 R2 R3 R4 R5 R6 R7
1 1 1 1 1 1 -1	-3 1-3-1-1-3-5 1 1-3 1-1-1-3-5-3	1-1 1 1 1 3-1	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
	-1 -1 -1 1 1 -1 -7 -1 1 1 -3 -1 -5 3 -1 -3 -1 3 -5 1 -3 -1 -3 -1	1 1 1-1-1 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
1	-1 3-5 1-3-1-3-1 3-1-1 1-3-1-3-5 1 1-3 3-1 1-5-3	1 1 1-1 1 1 3	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
1 1 1-1 1 1-1	1 1 1-1 1-7-1 1	-1-1 1 1 3 1-1   1-1 1 1-1 3 1-1	4 4 4 4 4 4 4 4 4 4
1 1 1-1 1-1 1	3-1 3 1 1-6-3-1	-1 1-1-1-1 3 1 1     1-1-1-1 1 3-1	4 4 4-4 4-4 4
1 1 1-1-1 1 1	3 3-1 1-3-5 1-1 1 5 3 3-1-3-1 1	-1 1 1-1 1 3 1 1 -1-3 1-1 1 1 1 1	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
	6 1 1 3-1 3-1 -3 3 3-1 5 1-1 3-1	-3-1-1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
	1-3-3-5-1-3-1 1  -1-1-5-3 1-1-3 3   3-5 1-3 1-1-3-1	1 1 1 3 1 1 1-1 1 1 3 1-1 1 1-1 1-1 3 1 1-1 1 1 1	4 4-4 4 4 4-4
1 1-1 1 1-1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1-3-3 1 3 1-5 1	-1 1 1 1-1-1 3-1 -1 1 3 1 1 1-1 1	4 4-4 4 4-4-4
	:		
-1 -1 1 -1 -1 -1    -1 -1 1 -1 -1 1	-3 1 5 3 3 1-1 1 -1 3 3 1-3-1 5-1	1-1-3 1-1-1 1-1	-4-4 4-4 4-4-4  -4-4 4-4-4 4 4
-1-11-1-11-1	3 5 1 3-1 1 3 1	1-3-1-1 1-1-1-1	-4-4 4-4-4 4-4  -4-4 4-4-4-4 4
-1 -1 1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	-1 3 3 6 1 3 1-1   3-3 1-5-1 1 3 1	1-1-1-3-1-1-1	-4-4 4-4-4-4 -4-4-4 4 4 4 4 -4-4-4 4 4 4-4
-1-1-1 1 1-1-1	-5-1-1 3 1 3 1 3 -1-6 3-3 1 3 1-1	3 1 1 1-1-1 1-1 1 1 1 1 1 1 1 1 1 1 1 1	-4 -4 -4 4 4 -4 4 -4 -4 -4 -4 -4 -4 -4 -
-1-1-1 1 1-1-1 -1-1-1 1-1 1 1	-3-3 1-1 3 5-1 1 -1-1-1-3-3 3 5-1 -3 1 3-1-1 5 3 1	1 1-1 1-1-3 1-1	-4-4-4 4-4 4 4 -4-4-4 4-4 4-4
-1 -1 -1 1 -1 1 -1    -1 -1 -1 1 -1 -1 1    -1 -1 -1 1 -1	-3 1 3-1-1 5 3 1 1-3 1-1-1 5 3-3 -1-1-1 1 1 7 1-1	1-1	-4-4-4 4-4-4 4 -4-4-4 4-4-4-4
-1 -1 -1 -1 -1 -1    -1 -1 -1 -1   1   1    -1 -1 -1 -1   1   1	1-1 3-3 1-1 6 3	1 1-1 1-1 1-3-1	-4-4-4-4 4 4 4 -4-4-4-4 4 4-4
-1-1-1	1-3 5-1 3 1 3 1  -1-1 3 1 5 3 1 3	-1 1 3 1-1-1-1 1	-4-4-4-4 4-4 4 -4-4-4-4 4-4-4
-1 -1 -1 -1	1 1 1-1-1 1 7 1	-1-1-1	-4 -4 -4 -4 4 4 -4 -4 -4 -4 4 4-4
-1 -1 -1 -1 -1 1  -1 -1 -1 -1 -1 -1	3-1 3 1 1 3 5-1		-4 -4 -4 -4 -4 4 -4 -4 -4 -4 -4 -4

DISPLAY PATTERN OP- ALL- ALL-TIONAL ON OFF REVERSAL PRIOR ART FIG.13 OPTIONAL OPTIONAL OPTIONAL OPTIONAL ONE-TIME SCANNING (FIELD) 1/2 CYCLE F<sub>1</sub>(t) <sup>+Vr</sup>h F<sub>2</sub>(t) -Vr F<sub>3</sub>(t) G<sub>1</sub>(t) G<sub>2</sub>(t) G3(t) F4(t)  $F_5(t)$ F<sub>6</sub>(t) F<sub>7</sub>(t) F<sub>8</sub>(t)

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FOURTH CYCLE **M3 W4** \}" THIRD CYCLE W3 **W4** × FIG. 14 PRIOR ART SECOND CYCLE W3 **W**2 **∑**= FIRST CYCLE **W**2 **M3** ₩ M

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